

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-36. (cancelled)

37. (currently amended) A recombinant virus which comprises at least one foreign nucleic acid inserted within a non-essential region of the viral genome, wherein said foreign nucleic acid (a) ~~encodes a protein selected from the groups consisting of: a feline CD28 protein or an immunogenic portion thereof; a feline CD80 protein or an immunogenic portion thereof; a feline CD86 protein~~ having an amino acid sequence of SEQ ID NO:6 or an immunogenic portion thereof; ~~and a feline CTLA-4 protein or an immunogenic portion thereof;~~ and (b) is expressed when the recombinant virus is introduced into an appropriate host.

38. (withdrawn) The recombinant virus of claim 37 which comprises at least two foreign nucleic acids, wherein each is inserted within a non-essential region of the viral genome.

39. (withdrawn) The recombinant virus of claim 37 which comprises at least three foreign nucleic acids, wherein each is inserted within a non-essential region of the viral genome.

40. (withdrawn) The recombinant virus of claim 37 which comprises four foreign nucleic acids, wherein each is inserted within a non-essential region of the viral genome.

41. (currently amended) The recombinant virus of claim 37, wherein the virus is ~~raccoonpox virus; a swinepox virus; or a feline herpesvirus.~~

42. (withdrawn) The recombinant virus of claim 37 comprising more than one foreign nucleic acid, wherein each foreign nucleic acid is inserted into the same non-essential region of the viral genome.

43. (withdrawn) The recombinant virus of claim 37 comprising more than one foreign nucleic acid, wherein each foreign nucleic acid is not inserted into the same non-essential region of the viral genome.

44. (withdrawn) The recombinant virus of claim 37 further comprising a foreign nucleic acid encoding an immunogen derived from a pathogen.
45. (withdrawn) The recombinant virus of claim 44, wherein the pathogen is a feline pathogen, a rabies virus, Chlamydia, *Toxoplasma gondii*, *Dirofilaria immitis*, a flea, or a bacterial pathogen.
46. (withdrawn) The recombinant virus of claim 45, wherein the feline pathogen is feline immunodeficiency virus (FIV), feline leukemia virus (FeLV), feline infectious peritonitis virus (FIP), feline panleukopenia virus, feline calicivirus, feline reovirus type 3, feline rotavirus, feline coronavirus, feline syncytial virus, feline sarcoma virus, feline herpesvirus, feline Born disease virus, or a feline parasite.
47. (withdrawn) The recombinant virus of claim 37, wherein at least one foreign nucleic acid, comprises a promoter for expressing the foreign nucleic acid.
48. (previously presented) The recombinant virus of claim 37, wherein the expression of at least one foreign nucleic acid is under the control of a promoter endogenous to the virus.
49. (withdrawn) The recombinant virus of claim 37 further comprising a foreign nucleic acid encoding a detectable marker.
50. (withdrawn) The recombinant virus of claim 49, wherein the detectable marker is *E. coli* beta galactosidase.
51. (withdrawn) The recombinant virus of claim 46, wherein the immunogen from a feline pathogen is FIV gag protease, a FIV envelope protein, a FeLV gag protease, or a FeLV envelope protein.
52. (withdrawn) The recombinant virus of claim 37, wherein the virus is a feline herpesvirus and the non-essential region is the glycoprotein E gene of feline herpesvirus.
53. (withdrawn) The recombinant virus of claim 48, where in the recombinant virus is a feline herpesvirus designated S-FHV-031 (ATCC Accession No. VR-2604).
54. (previously presented) The recombinant virus of claim 37, wherein the virus is swinepox virus and the non-essential region is the larger Hind III to Bgl II subfragment of the Hind III M fragment of swinepox virus.

55. (withdrawn) The recombinant virus of claim 50, wherein the recombinant virus is a swinepox virus designated S-SPV-246 (ATCC Accession No. VR-2603).
56. (withdrawn) The recombinant virus of claim 37, wherein the portion of the CD28, CD80, or CD86 protein is the soluble portion of the protein.
57. (withdrawn) The recombinant virus of claim 37, where the foreign nucleic acid encodes the feline CTLA-4 protein.
58. (currently amended) A vaccine comprising ~~an effective immunizing amount of~~ the recombinant virus of claim 37, wherein the recombinant virus is in an effective immunizing amount, and a suitable carrier.
59. (previously presented) The vaccine of claim 58, wherein the effective immunizing amount of the recombinant virus is an amount between about 1×10^5 pfu/ml and about 1×10^8 pfu/ml.
60. (withdrawn) The vaccine of claim 58 which further comprises an admixture of the recombinant virus with an effective immunizing amount of a second immunogen.
61. (withdrawn) A method of enhancing an immune response in a feline which comprises administering to the feline an effective immunizing amount of the recombinant virus of claim 37.
62. (withdrawn) A method for immunizing a feline which comprises administering to the feline an effective immunizing amount of the recombinant virus of claim 37.
63. (withdrawn) A method for suppressing an immune response in a feline which comprises administering to the feline any effective suppressing amount of the recombinant virus of claim 56.
64. (withdrawn) The method of claim 61, wherein the administering comprises intravenous, subcutaneous, intramuscular, transmuscular, topical, oral, or intraperitoneal administration.
65. (withdrawn) The method of claim 63, wherein the feline is the recipient of a transplanted organ or tissue or is suffering from an immune response.
66. (cancelled)

67. (withdrawn) A method for reducing or abrogating a tumor in a feline which comprises administering to the tumor in the feline a recombinant virus of claim 37, wherein the nucleic acid encodes a feline CD80 protein, a feline CD86 protein or a combination thereof in an amount effective to reduce or abrogate the tumor.
68. (withdrawn) The method of claim 67, wherein the recombinant virus further comprises, and is capable of expressing, a feline tumor associated antigen and the administration is effected systemically.
69. (withdrawn) The recombinant virus of claim 37, further comprising a nucleic acid encoding feline immunodeficiency virus genome or a portion thereof.
70. (withdrawn) The recombinant virus of claim 37, further comprising a nucleic acid encoding feline leukemia virus genome or a portion thereof.
71. (withdrawn- currently amended) The recombinant virus of claim 69, further comprising a nucleic acid encoding feline GM-CSF₁[[or]] feline IL-12 p35 [[and]] or feline IL-12 p40.
72. (withdrawn- currently amended) The recombinant virus of claim 70, further comprising a nucleic acid encoding feline GM-CSF₁[[or]] feline IL-12 p35 [[and]] or feline IL-12 p40.
73. (withdrawn) A vaccine which comprises an effective immunizing amount of the recombinant virus of claim 69 and a suitable carrier.
74. (withdrawn) A vaccine which comprises an effective immunizing amount of the recombinant virus of claim 70 and a suitable carrier.
75. (withdrawn) The recombinant virus of claim 37, further comprising a nucleic acid encoding the feline infectious peritonitis virus genome or a portion thereof.
76. (previously presented) The recombinant virus of claim 37, wherein the virus is a swinepox virus and the nonessential region is within the HindIII K fragment.
77. (previously presented) The recombinant virus of claim 37, wherein the virus is a swinepox virus and the nonessential region is within the HindIII N fragment.

78. (new) A vector comprising an isolated nucleic acid encoding a feline CD86 or a feline soluble CD86 ligand, wherein the nucleic acid encodes the amino acid sequence of SEQ ID NO:6.

79. (new) The vector of claim 78, wherein the nucleic acid has a nucleic acid sequence of SEQ ID NO:5.

80. (new) A host cell which comprises a vector of claim 78.

81. (new) The host cell of claim 80, wherein the host cell is a eukaryotic or a prokaryotic cell.

82. (new) The host cell of claim 81, wherein the host cell is selected from the group consisting of: *E. coli*, yeast, COS cells, PC12 cells, CHO cells, and GH4C1 cells.